

MOTOR FUEL EXCISE TAX (MFET) DEVELOPER'S HANDBOOK

Filing Electronically With the State of Utah Using XML

Contents

Contents	1
1. General information	4
2. Supported Forms	4
3. MFET Web Service	4
NewSubmission	5
SubmissionListByDate	9
SubmissionListByReferenceId	11
SubmissionListBySubmissionId	13
4. Populating XML Data Elements	16
Schema Validation	16
Business Rule Validation	16
Table Definitions	16
Element XPATH	16
File	16

<u>Pay</u>	17
<u>Map</u>	17
<u>Category</u>	17
<u>Notes</u>	17
<u>Choice Gate</u>	17
5. Populating XML RETURN Data Elements (Table Layouts)	19
<u>TC-109 - Motor Fuels Header (MotorFuelsHeader.xsd)</u>	19
<u>TC-109 - Motor Fuels Return (MotorFuelsHeader.xsd)</u>	22
<u>TC-109A - Supplier Report (MFSupplierReportType.xsd)</u>	24
<u>TC-109B - Distributor Report (MFDistributorReportType.xsd)</u>	26
6. Populating XML FINANCIAL Data Elements (Table Layouts)	28
<u>Return Payment (FinancialTransaction.xsd)</u>	28
7. Enumerations	29
<u>Country</u>	29
<u>State</u>	39
<u>Province</u>	42
<u>Mode</u>	42
<u>Type Of Address</u>	43

<u>Airport Code.....</u>	<u>43</u>
<u>Account Holder Type.....</u>	<u>45</u>
<u>Missing EIN Reason.....</u>	<u>45</u>
<u>Type of Filing.....</u>	<u>45</u>
<u>Originator Type.....</u>	<u>46</u>

1. General information

The purpose of this document is to facilitate the development of software for filing the Utah Uniform Fuel Tax Return (TC-109) electronically in XML format. The State of Utah conforms to Motor Fuel Excise Tax (MFET) XML standards as defined by the FTA and TIGERS. Please refer to the FAQ document for questions not addressed in this document. Additional inquiries can be made via the email address ftx@utah.gov

2. Supported Forms

Utah is accepting the following forms for tax year 2009:

- **TC-109** (Utah Fuel Tax Return)
- **TC-109A** (TC-109 Schedule A, Utah Distributor/Supplier Schedule of Receipts)
- **TC-109B** (TC-109 Schedule B - Utah Distributor/Supplier Schedule of Disbursements)

3. MFET Web Service

XML files must be submitted to the Utah State Tax Commission (USTC) via the MFET web service. The MFET web service description, wsdl and xsd files are located on the USTC website at <http://tax.utah.gov/fuel/efile.html> under the section titled Information for Software Developers on the row named MFET Web Service Objects. The production MFET web service is still under construction. The anticipated production implementation date is 09/20/2010. Please continue to refer to the website for continual updates. Additional inquiries can be made via the email address ftx@utah.gov.

The USTC is currently hosting a test version of the MFET web service. The URL for this test web service is <https://tapstaging.tax.utah.gov/efile/mfet>. The production URL will be published at a later date. Connection to the MFET web service requires security credentials for the test environment as well as the production environment. Security credentials can be obtained by submitting a Security Request form to ftx@utah.gov. The Security Request form can be downloaded from <http://tax.utah.gov/fuel/efile.html>.

The MFET web service consists of the following four operations: **NewSubmission**, **SubmissionListByDate**, **SubmissionListByReferenceId** and, **SubmissionListBySubmissionId**. The **NewSubmission** operation is used to submit new returns. The SubmissionList operations are used to retrieve basic information about submissions either by date range, ReferenceId, or SubmissionId. These service operations are described in greater detail below.

NewSubmission

The NewSubmission operation is used to submit new returns. This operation requires the following elements User, Password, Environment, SubmissionType, ReferenceId, and File and returns SubmissionId. A table describing the input and return values is shown below.

The NewSubmission operation can throw three service specific faults: CredentialsFault, GenericServiceFault, and NewSubmissionFault. The CredentialsFault and GenericServiceFault faults are simple and only contain a string briefly describing the fault. The NewSubmissionFault contains detailed information about problems with the submission file itself. An example of the NewSubmission request, response and each fault are shown below.

Type	Element	Return Value
Input Parameters	//Soap/Header/MFETHeader/User	
	//Soap/Header/MFETHeader>Password	
	//Soap/Header/MFETHeader/Environment	Enumerated value which indicates desired environment (Test (T) or Production (P))
	//Soap/Body/SubmissionType	This is an enumeration currently the only option is TC109XML
	//Soap/Body/ReferenceId	This is an optional element which is used with the SubmissionList operation to track your submissions
	//Soap/Body/File	This is a byte array of the Xml Document
Return Values	//Soap/Body/SubmissionId	This is a unique Id to track this submission

NewSubmission Request

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.fastenterprises.com/MFET/NewSubmission </a:Action>
```

```

<h:MFETHeader xmlns:h="http://www.fastenterprises.com" xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
    <h:User>User</h:User>
    <h>Password>Password</h>Password>
    <h:Environment>T</h:Environment>
</h:MFETHeader>
<a:MessageID>urn:uuid:d01106bf-c6c7-414b-a081-46c9a9440734 </a:MessageID>
<a:ReplyTo>
    <a:Address>http://www.w3.org/2005/08/addressing/anonymous </a:Address>
</a:ReplyTo>
<a:To s:mustUnderstand="1">https://tapstaging.tax.utah.gov/efile/mfet </a:To>
</s:Header>
<s:Body>
    <SubmissionType xmlns="http://www.fastenterprises.com">TC109XML</SubmissionType>
    <Referenceld xmlns="http://www.fastenterprises.com">20100712T0415087219</Referenceld>
    <File xmlns="http://www.fastenterprises.com">Submission File Data</File>
</s:Body>
</s:Envelope>

```

NewSubmission Response

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
    <s:Header>
        <a:Action s:mustUnderstand="1">http://www.fastenterprises.com/MFET/NewSubmissionResponse </a:Action>
        <a:RelatesTo>urn:uuid:d01106bf-c6c7-414b-a081-46c9a9440734 </a:RelatesTo>
    </s:Header>
    <s:Body>
        <SubmissionId xmlns="http://www.fastenterprises.com">20101930000511705088</SubmissionId>
    </s:Body>
</s:Envelope>

```

NewSubmission CredentialsFault

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
    <s:Header>
        <a:Action s:mustUnderstand="1">http://www.fastenterprises.com/MFET/NewSubmissionCredentialsFaultFault </a:Action>
        <a:RelatesTo>urn:uuid:d01106bf-c6c7-414b-a081-46c9a9440734 </a:RelatesTo>
    </s:Header>
    <s:Body>

```

```

<s:Fault>
  <s:Code>
    <s:Value>s:Sender</s:Value>
  </s:Code>
  <s:Reason>
    <s:Text xml:lang="en-US">Access Denied</s:Text>
  </s:Reason>
  <s:Detail>
    <CredentialsFault xmlns="http://www.fastenterprises.com" xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
      <Message>Access Denied</Message>
    </CredentialsFault>
  </s:Detail>
</s:Fault>
</s:Body>
</s:Envelope>

```

NewSubmission GenericServiceFault

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.fastenterprises.com/MFET/NewSubmissionGenericServiceFaultFault </a:Action>
    <a:RelatesTo>urn:uuid:d01106bf-c6c7-414b-a081-46c9a9440734 </a:RelatesTo>
  </s:Header>
  <s:Body>
    <s:Fault>
      <s:Code>
        <s:Value>s:Sender</s:Value>
      </s:Code>
      <s:Reason>
        <s:Text xml:lang="en-US">Error Occured, Error Number: 1904214016</s:Text>
      </s:Reason>
      <s:Detail>
        <ServiceFault xmlns="http://www.fastenterprises.com" xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
          <Message>Error Occured, Error Number: 1904214016</Message>
        </ServiceFault>
      </s:Detail>
    </s:Fault>
  </s:Body>
</s:Envelope>

```

NewSubmission NewSubmissionFault

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope " xmlns:a="http://www.w3.org/2005/08/addressing ">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.fastenterprises.com/MFET/NewSubmissionNewSubmissionFaultFault </a:Action>
    <a:RelatesTo>urn:uuid:d01106bf-c6c7-414b-a081-46c9a9440734 </a:RelatesTo>
  </s:Header>
  <s:Body>
    <s:Fault>
      <s:Code>
        <s:Value>s:Sender</s:Value>
      </s:Code>
      <s:Reason>
        <s:Text xml:lang="en-US">Submission File had errors</s:Text>
      </s:Reason>
      <s:Detail>
        <NewSubmissionFault xmlns="http://www.fastenterprises.com " xmlns:i="http://www.w3.org/2001/XMLSchema-instance ">
          <Message>Submission File had errors</Message>
          <Errors>
            <NewSubmissionFaultError>
              <Error>The 'http://www.irs.gov/efile:State' element is invalid - The value 'Junk' is invalid according to its datatype  

'<http://www.irs.gov/efile:StateType' - The Enumeration constraint failed. </Error>
            </NewSubmissionFaultError>
            <NewSubmissionFaultError>
              <Error>The 'http://www.irs.gov/efile:Penalty' element is invalid - The value 'LaLaLa1234567891234.12' is invalid  

according to its datatype '<http://www.irs.gov/efile:MFAmountType' - The string 'LaLaLa1234567891234.12' is not a valid Decimal value. </Error>
            </NewSubmissionFaultError>
            <NewSubmissionFaultError>
              <Error>The element 'MotorFuelsFiling' in namespace 'http://www.irs.gov/efile' has invalid child element 'Jurisdiction' in  

namespace 'http://www.irs.gov/efile'. List of possible elements expected: 'MotorFuelsHeader' in namespace 'http://www.irs.gov/efile'. </Error>
            </NewSubmissionFaultError>
          </Errors>
        </NewSubmissionFault>
      </s:Detail>
    </s:Fault>
  </s:Body>
</s:Envelope>
```

SubmissionListByDate

The SubmissionListByDate operation is used to retrieve a list of submissions made over a period of time. This operation requires the following elements User, Password, Environment, DateFrom, and DateTo and returns a SubmissionList element. A table describing the input and return values is shown below.

The SubmissionListByDate operation can throw two service specific faults: CredentialsFault and GenericServiceFault. These faults are simple and only contain a string briefly describing the fault. An example of the SubmissionListByDate request and response are shown below.

Type	Element	Return Value
Input Parameters	//Soap/Header/MFETHeader/User	
	//Soap/Header/ MFETHeader/Password	
	//Soap/Header/ MFETHeader/Environment	Enumerated value which indicates desired environment (Test (T) or Production (P))
	//Soap/Body/DateFrom	Date Search Begins
	//Soap/Body/DateTo	Date Search Ends
Return Values	//Soap/Body/SubmissionList	Array of Submission elements which contain <ul style="list-style-type: none">• SubmissionType• Reference ID• Submission ID• Errorred (true or false)• TimeStamp (local time of the State when the submission was received)

SubmissionListByDate Request

`<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">`

```

<s:Header>
  <a:Action s:mustUnderstand="1">http://www.fastenterprises.com/MFET/SubmissionListByDate </a:Action>
  <h:MFETHeader xmlns:h="http://www.fastenterprises.com" xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
    <h:User>User</h:User>
    <h:Password>Password</h:Password>
    <h:Environment>T</h:Environment>
  </h:MFETHeader>
  <a:MessageID>urn:uuid:96649ec5-ec8d-4b88-9c80-823b8167107d </a:MessageID>
  <a:ReplyTo>
    <a:Address>http://www.w3.org/2005/08/addressing/anonymous </a:Address>
  </a:ReplyTo>
  <a:To s:mustUnderstand="1">https://tapstaging.tax.utah.gov/efile/mfet </a:To>
</s:Header>
<s:Body>
  <DateFrom xmlns="http://www.fastenterprises.com">1900-01-01T00:00:00 </DateFrom>
  <DateTo xmlns="http://www.fastenterprises.com">3000-01-01T00:00:00 </DateTo>
</s:Body>
</s:Envelope>

```

SubmissionListByDate Response

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.fastenterprises.com/MFET/SubmissionListByDateResponse </a:Action>
    <a:RelatesTo>urn:uuid:96649ec5-ec8d-4b88-9c80-823b8167107d </a:RelatesTo>
  </s:Header>
  <s:Body>
    <SubmissionList xmlns="http://www.fastenterprises.com" xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
      <Submission>
        <SubmissionType>TC109XML</SubmissionType>
        <Referenceld>20100712T0418316704 </Referenceld>
        <Errored>true</Errored>
        <SubmissionId></SubmissionId>
        <TimeStamp>2010-07-12T16:18:31.827 </TimeStamp>
      </Submission>
      <Submission>
        <SubmissionType>TC109XML</SubmissionType>
        <Referenceld>20100712T0418373127 </Referenceld>
        <Errored>false</Errored>
      </Submission>
    </SubmissionList>
  </s:Body>
</s:Envelope>

```

```

<SubmissionId>20101930001098907648</SubmissionId>
<TimeStamp>2010-07-12T16:18:37.453</TimeStamp>
</Submission>
<Submission>
  <SubmissionType>TC109XML</SubmissionType>
  <Referenceld>20100712T0418450610</Referenceld>
  <Errored>false</Errored>
  <SubmissionId>20101930000562036736</SubmissionId>
  <TimeStamp>2010-07-12T16:18:45.203</TimeStamp>
</Submission>
</SubmissionList>
</s:Body>
</s:Envelope>

```

SubmissionListByReferenceId

The SubmissionListByReferenceId operation is used to retrieve submissions made with a specific Referenceld. This operation requires the following elements User, Password, Environment, and Referenceld and returns a SubmissionList element. A table describing the input and return values is shown below.

The SubmissionListByReferenceId operation can throw two service specific faults: CredentialsFault and GenericServiceFault. These faults are simple and only contain a string briefly describing the fault. An example of the SubmissionListByReferenceId request and response are shown below.

Type	Element	Return Value
Input Parameter s	//Soap/Header/ MFETHeader/User	
	//Soap/Header/ MFETHeader/Password	
	//Soap/Header/ MFETHeader/Environment	Enumerated value which indicates desired environment (Test (T) or Production (P))
	//Soap/Body/Referenceld	Referenceld to search for

Type	Element	Return Value
Return Values	//Soap/Body/SubmissionList	<p>Array of Submission elements which contain</p> <ul style="list-style-type: none"> • SubmissionType • Reference ID • Submission ID • Errored (true or false) • TimeStamp (local time of the State when the submission was received)

SubmissionListByReferenceld Request

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.fastenterprises.com/MFET/SubmissionListByReferenceld </a:Action>
    <h:MFETHeader xmlns:h="http://www.fastenterprises.com" xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
      <h:User>User</h:User>
      <h>Password>Password</h>Password>
      <h:Environment>T</h:Environment>
    </h:MFETHeader>
    <a:MessageID>urn:uuid:902dedc5-bd1e-4ffc-b40b-f8bfe0a414fa </a:MessageID>
    <a:ReplyTo>
      <a:Address>http://www.w3.org/2005/08/addressing/anonymous </a:Address>
    </a:ReplyTo>
    <a:To s:mustUnderstand="1">https://tapstaging.tax.utah.gov/efile/mfet </a:To>
  </s:Header>
  <s:Body>
    <Referenceld xmlns="http://www.fastenterprises.com">20100712T0418316704 </Referenceld>
  </s:Body>
</s:Envelope>

```

SubmissionListByReferenceld Response

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.fastenterprises.com/MFET/SubmissionListByReferenceldResponse </a:Action>
    <a:RelatesTo>urn:uuid:902dedc5-bd1e-4ffc-b40b-f8bfe0a414fa </a:RelatesTo>
  </s:Header>

```

```

<s:Body>
  <SubmissionList xmlns="http://www.fastenterprises.com" xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
    <Submission>
      <SubmissionType>TC109XML</SubmissionType>
      <Referenceld>20100712T0418316704</Referenceld>
      <Errored>true</Errored>
      <SubmissionId></SubmissionId>
      <TimeStamp>2010-07-12T16:18:31.827</TimeStamp>
    </Submission>
  </SubmissionList>
</s:Body>
</s:Envelope>

```

SubmissionListBySubmissionId

The SubmissionListBySubmissionId operation is used to retrieve submissions that returned a specific SubmissionId. This operation requires the following elements User, Password, Environment, and SubmissionId and returns a SubmissionList element. A table describing the input and return values is shown below.

The SubmissionListBySubmissionId operation can throw two service specific faults: CredentialsFault and GenericServiceFault. These faults are simple and only contain a string briefly describing the fault. An example of the SubmissionListByReferenceld request and response are shown below.

Type	Element	Return Value
Input Parameters	//Soap/Header/ MFETHeader/User	
	//Soap/Header/ MFETHeader/Password	
	//Soap/Header/ MFETHeader/Environment	Enumerated value which indicates desired environment (Test (T) or Production (P))
	//Soap/Body/SubmissionId	SubmissionId to search for

Type	Element	Return Value
Return Values	//Soap/Body/SubmissionList	<p>Array of Submission elements which contain</p> <ul style="list-style-type: none"> • SubmissionType • Reference ID • Submission ID • Errored (true or false) • TimeStamp (local time of the State when the submission was received)

SubmissionListBySubmissionId Request

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.fastenterprises.com/MFET/SubmissionListBySubmissionId </a:Action>
    <h:MFETHeader xmlns:h="http://www.fastenterprises.com" xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
      <h:User>User</h:User>
      <h>Password>Password</h>Password>
      <h:Environment>T</h:Environment>
    </h:MFETHeader>
    <a:MessageID>urn:uuid:b9ad3cf5-f743-4d88-bb26-611d16fe9a1d </a:MessageID>
    <a:ReplyTo>
      <a:Address>http://www.w3.org/2005/08/addressing/anonymous </a:Address>
    </a:ReplyTo>
    <a:To s:mustUnderstand="1">https://tapstaging.tax.utah.gov/efile/mfet </a:To>
  </s:Header>
  <s:Body>
    <SubmissionId xmlns="http://www.fastenterprises.com">20101930000562036736 </SubmissionId>
  </s:Body>
</s:Envelope>

```

SubmissionListBySubmissionId Response

```

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">http://www.fastenterprises.com/MFET/SubmissionListBySubmissionIdResponse </a:Action>
    <a:RelatesTo>urn:uuid:b9ad3cf5-f743-4d88-bb26-611d16fe9a1d </a:RelatesTo>
  </s:Header>

```

```
<s:Body>
<SubmissionList xmlns="http://www.fastenterprises.com" xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
  <Submission>
    <SubmissionType>TC109XML</SubmissionType>
    <Referenceld>20100712T0418450610</Referenceld>
    <Errored>false</Errored>
    <SubmissionId>20101930000562036736</SubmissionId>
    <TimeStamp>2010-07-12T16:18:45.203</TimeStamp>
  </Submission>
</SubmissionList>
</s:Body>
</s:Envelope>
```

4. Populating XML Data Elements

Schema Validation

MFET submissions must be of a valid XML format as defined by the current MFET schema set.

Submissions which do not pass schema validation will be rejected. Schema validation includes the validation of appropriate XPATHs and individual element constraints.

Business Rule Validation

The current MFET service hosted by USTC does not include automated business rule processing.

Software developed for use with the USTC MFET service must comply with business rules as defined in the “Software Certification Guide”.

Table Definitions

This guide contains table layouts used to define how data elements should be populated using the current MFET schema set. Each table contains the following columns:

Element XPATH

Combined with the XPATH prefix listed in the table header, defines the full XPATH of the data element listed.

File

Indicates when an element is required when filing return data. A value of “Yes” indicates the element is required. The element may be required by the schema or the element may be required by business rule processing. Elements required by the schema are enforced by schema validation.

Elements required by business rule processing are enforced by software certification. A value of “No” indicates the element is not required either by the schema or by business rule processing.

Pay

Indicates when an element is required when filing payment data. A value of “Yes” indicates the element is required. The element may be required by the schema or the element may be required by business rule processing. Elements required by the schema are enforced by schema validation.

Elements required by business rule processing are enforced by software certification. A value of “No” indicates the element is not required either by the schema or by business rule processing.

Map

Indicates the position of the data element on the tax return or payment.

Category

Indicates the category of the data element as it relates to submission, demographic, return, schedule or payment data.

Notes

Notes indicating standard or special conditions associated with the data element.

Choice Gate

Color coded table entries associated with “choice” text represent schema choice gates. A schema choice gate indicates the XPATH must be of one choice or the other, but not both. The beginning of

the choice is identified with the text “BEGIN CHOICE”. The alternate XPATH of the choice is identified with the text “OR”. The end of the choice is identified with the text “END CHOICE”.

5. Populating XML RETURN Data Elements (Table Layouts)

TC-109 - Motor Fuels Header (*MotorFuelsHeader.xsd*)

MotorFuelsHeader.xsd is used for submission, filer, preparer and return level data. This schema is also used for additional return detail level data described in a following section. Elements of this schema are required for filing a return and/or paying on the filing period associated with the return. Use the table below as a guide for populating data elements of the current schema set.

Element XPATH (<i>MotorFuelsFiling.xsd</i>) XPATH Prefix: //MotorFuelsFiling/MotorFuelsHeader	File	Pay	Map	Category	Notes
source	Yes	Yes	Attribute	Schema	Default Value ["MF"]
version	Yes	Yes	Attribute	Schema	Default Value ["001"]
xmlns	Yes	Yes	Attribute	Schema	Default Value ["http://www.irs.gov/efile"]
/Jurisdiction	Yes	Yes	Schema	Schema	Default "EMT"
/Timestamp	Yes	Yes	Schema	Schema	Default "9999-12-31T12:00:00Z"
/TaxPeriodBeginDate	Yes	Yes	Header	Header	
/TaxPeriodEndDate	Yes	Yes	Header	Header	
/TaxYear	Yes	Yes	Schema	Schema	Default "9999"
/Originator/EFIN	Yes	Yes	Schema	Schema	Default Value "000000"
/Originator/Type	Yes	Yes	Schema	Schema	Default "ERO"
/Originator/PractitionerPIN/EFIN	Yes	Yes	Schema	Schema	Default Value "000000"
/Originator/PractitionerPIN/PIN	Yes	Yes	PIN	Filer	
/SoftwareId	Yes	Yes	Submission	Header	
/SoftwareVersion	Yes	Yes	Submission	Header	
/AmmendedReturnIndicator	No	No	Amended	Return	
/TypeOfFiling	Yes	Yes	Submission	Header	Default "Original"
/Filer/FEIN	Yes	Yes	ID	Filer	
/Contact/Name	Yes	Yes	Contact	Filer	

Element XPATH (MotorFuelsFiling.xsd)	File	Pay	Map	Category	Notes
XPATH Prefix: //MotorFuelsFiling/MotorFuelsHeader					
/Contact/Phone	Yes	Yes	Contact	Filer	
BEGIN CHOICE (Filer Address)					
/Address/USAddress/AddressLine1	Yes	No	Address	Filer	
/Address/USAddress/AddressLine2	No	No	Address	Filer	
/Address/USAddress/City	Yes	No	Address	Filer	
/Address/USAddress/State	Yes	No	Address	Filer	
/Address/USAddress/ZIPCode	Yes	No	Address	Filer	
OR (Filer Address)					
/Address/ForeignAddress/AddressLine1	Yes	No	Address	Filer	
/Address/ForeignAddress/AddressLine2	No	No	Address	Filer	
/Address/ForeignAddress/City	No	No	Address	Filer	
/Address/ForeignAddress/ProvinceOrState	No	No	Address	Filer	
/Address/ForeignAddress/Country	Yes	No	Address	Filer	
/Address/ForeignAddress/PostalCode	Yes	No	Address	Filer	
END CHOICE (Filer Address)					
/Address/TypeOfAddress	No	No	Address	Filer	Enumerated
/Address/ChangeOfAddress	No	No	Address	Filer	
BEGIN CHOICE (Preparer EIN)					
/PreparerFirm/EIN	Yes	Yes	ID	Preparer	
OR (Preparer EIN)					
/PreparerFirm/MissingEINReason	Yes	Yes	ID	Preparer	Enumerated
END CHOICE (Preparer EIN)					
/PreparerFirm/PreparerFirmBusinessName/BusinessNameLine1	Yes	Yes	Name	Preparer	
/PreparerFirm/PreparerFirmBusinessName/BusinessNameLine2	No	No	Name	Preparer	
BEGIN CHOICE (Preparer Address)					
/PreparerFirm/PreparerFirmUSAddress/AddressLine1	Yes	Yes	Address	Preparer	
/PreparerFirm/PreparerFirmUSAddress/AddressLine2	No	No	Address	Preparer	

Element XPATH (MotorFuelsFiling.xsd)	File	Pay	Map	Category	Notes
XPATH Prefix: //MotorFuelsFiling/MotorFuelsHeader					
/PreparerFirm/PreparerFirmUSAAddress/City	Yes	Yes	Address	Preparer	
/PreparerFirm/PreparerFirmUSAAddress/State	Yes	Yes	Address	Preparer	Enumerated
/PreparerFirm/PreparerFirmUSAAddress/ZIPCode	Yes	Yes	Address	Preparer	
OR (Preparer Address)					
/PreparerFirm/PreparerFirmForeignAddress/AddressLine1	Yes	Yes	Address	Preparer	
/PreparerFirm/PreparerFirmForeignAddress/AddressLine2	No	No	Address	Preparer	
/PreparerFirm/PreparerFirmForeignAddress/City	Yes	Yes	Address	Preparer	
/PreparerFirm/PreparerFirmForeignAddress/ProvinceOrState	Yes	Yes	Address	Preparer	Enumerated
/PreparerFirm/PreparerFirmForeignAddress/Country	Yes	Yes	Address	Preparer	Enumerated
/PreparerFirm/PreparerFirmForeignAddress/PostalCode	No	No	Address	Preparer	
END CHOICE (Preparer Address)					
/Preparer/Name	Yes	Yes	Name	Preparer	
BEGIN CHOICE (Preparer Id)					
/Preparer/SSN	Yes	Yes	ID	Preparer	
OR (Preparer Id)					
/Preparer/PTIN	Yes	Yes	ID	Preparer	
END CHOICE (Preparer Id)					
BEGIN CHOICE (Preparer Phone)					
/Preparer/Phone	Yes	Yes	Telephone	Preparer	
OR (Preparer Phone)					
/Preparer/ForeignPhone	Yes	Yes	Telephone	Preparer	
END CHOICE (Preparer Phone)					
/Preparer/EmailAddress	No	No	Email	Preparer	

TC-109 - Motor Fuels Return (MotorFuelsHeader.xsd)

An additional use of MotorFuelsHeader.xsd is used for return level detail data associated with the TC-109. Elements of this schema are required for filing a return. Use the table below as a guide for populating data elements of the current schema set.

Element XPATH (MotorFuelsFiling.xsd) XPATH Prefix: //MotorFuelsFiling/SupplierReport/TaxOrFee/		File	Pay	Map	Category
Data Value: /TaxOrFeeCategory	Data Value: /TotalTaxOrFeeDue				
BEGIN CHOICE (Election)					
GrossElection	1 or 0	Yes	No	Election Type	Return
OR (Election)					
NetElection	1 or 0	Yes	No	Election Type	Return
END CHOICE (Election)					
BeginningPhysicalInventoryMF	Quantity	Yes	No	Main Page Line 1A	Return
BeginningPhysicalInventoryUD	Quantity	Yes	No	Main Page Line 1B	Return
BeginningPhysicalInventoryDD	Quantity	Yes	No	Main Page Line 1C	Return
BeginningPhysicalInventoryAV	Quantity	Yes	No	Main Page Line 1D	Return
BeginningPhysicalInventoryEA	Quantity	Yes	No	Main Page Line 1E	Return
ManufacturedCompoundedMF	Quantity	Yes	No	Main Page Line 2A	Return
ManufacturedCompoundedUD	Quantity	Yes	No	Main Page Line 2B	Return
ManufacturedCompoundedDD	Quantity	Yes	No	Main Page Line 2C	Return
ManufacturedCompoundedAV	Quantity	Yes	No	Main Page Line 2D	Return
ManufacturedCompoundedEA	Quantity	Yes	No	Main Page Line 2E	Return
EndingPhysicalInventoryMF	Quantity	Yes	No	Main Page Line	Return
EndingPhysicalInventoryUD	Quantity	Yes	No	Main Page Line	Return
EndingPhysicalInventoryDD	Quantity	Yes	No	Main Page Line	Return
EndingPhysicalInventoryAV	Quantity	Yes	No	Main Page Line	Return

Element XPATH (MotorFuelsFiling.xsd)		File	Pay	Map	Category
XPATH Prefix: //MotorFuelsFiling/SupplierReport/TaxOrFee/					
EndingPhysicalInventoryEA	Quantity	Yes	No	Main Page Line	Return
PreviousCredits	Currency	Yes	No	Main Page Line 34	Return
TotalDue	Currency	Yes	No	Main Page Line 36	Return

TC-109A - Supplier Report (MFSupplierReportType.xsd)

MFSupplierReportType.xsd is used for return schedule data associated with the TC-109A. Elements of this schema are required for filing a return which requires TC-109A. Use the table below as a guide for populating data elements of the current schema set.

Element XPATH (MFSupplierReportType.xsd) XPATH Prefix: //SupplierReport	File	Pay	Map	Category	Notes
reportUOM	Yes	No	Attribute	Schema	
reportCurrency	Yes	No	Attribute	Schema	
/SupplierSchedule/ScheduleCode	Yes	No	Column A - Schedule Type	TC109-A	Enumerated
/SupplierSchedule/ProductCode	Yes	No	Column B - Product Type	TC109-A	Enumerated
/SupplierSchedule/Mode	Yes	No	Column 3 - Mode	TC109-A	Enumerated
/SupplierSchedule/DocumentNumber	Yes	No	Column 8 - Manifest number	TC109-A	
/SupplierSchedule/ReceivedShippedDate	Yes	No	Column 7 - Ship date	TC109-A	
BEGIN CHOICE (Origin)					
/SupplierSchedule/Origin/State	Yes	No	Column 4 - Origin	TC109-A	
OR (Origin)					
/SupplierSchedule/Origin/Province	Yes	No	Column 4 - Origin	TC109-A	Enumerated
END CHOICE (Origin)					
BEGIN CHOICE (Destination)					
/SupplierSchedule/Destination/State	Yes	No	Column 4 - Destination	TC109-A	Enumerated
OR (Destination)					
/SupplierSchedule/Destination/Province	Yes	No	Column 4 - Destination	TC109-A	Enumerated
END CHOICE (Destination)					
/SupplierSchedule/Carrier/FEIN	Yes	No	Column 2 - Carrier FEIN	TC109-A	
/SupplierSchedule/Carrier/Name	Yes	No	Column 1 - Carrier name	TC109-A	
/SupplierSchedule/Seller/FEIN	Yes	No	Column 6 - Seller FEIN	TC109-A	
/SupplierSchedule/Seller/Name	Yes	No	Column 5 - Seller Name	TC109-A	

Element XPATH (MFSupplierReportType.xsd) XPATH Prefix: //SupplierReport	File	Pay	Map	Category	Notes
/SupplierSchedule/Net	Yes	No	Column 9 Net gallons	TC109-A	
/SupplierSchedule/Gross	Yes	No	Column 10 Gross gallons	TC109-A	

TC-109B - Distributor Report (MFDistributorReportType.xsd)

MFDistributorReportType.xsd is used for return schedule data associated with the TC-109B. Elements of this schema are required for filing a return which requires TC-109B. Use the table below as a guide for populating data elements of the current schema set.

Element XPATH (MFDistributorReportType.xsd) XPATH Prefix: //DistributorReport	File	Pay	Map	Category	Notes
reportUOM	Yes	No	Attribute	Schema	
reportCurrency	Yes	No	Attribute	Schema	
/DistributorSchedule/ScheduleCode	Yes	No	Column A - Schedule Type	TC109-B	Enumerated
/DistributorSchedule/ProductCode	Yes	No	Column B - Product Type	TC109-B	Enumerated
/DistributorSchedule/Mode	Yes	No	Column 3 - Mode	TC109-B	Enumerated
/DistributorSchedule/DocumentNumber	Yes	No	Column 9 - Manifest number	TC109-B	
/DistributorSchedule/ReceivedShippedDate	Yes	No	Column 8 - Ship date	TC109-B	
BEGIN CHOICE (Origin)					
/DistributorSchedule/Origin/State	Yes	No	Column 4 - Origin	TC109-B	Enumerated
OR (Origin)					
/DistributorSchedule/Origin/Province	Yes	No	Column 4 - Origin	TC109-B	Enumerated
END CHOICE (Origin)					
BEGIN CHOICE (Destination)					
/DistributorSchedule/Destination/State	Yes	No	Column 4 - Destination	TC109-B	Enumerated
OR (Destination)					
/DistributorSchedule/Destination/Province	Yes	No	Column 4 - Destination	TC109-B	Enumerated
OR (Destination)					
/DistributorSchedule/Destination/FacilityNumber	Yes	No	Column 5 – Airport Code The airport code should only be used with schedule types '5', '5X' and '5XA' when the product type	TC109-B	Enumerated

Element XPATH (MFDistributorReportType.xsd) XPATH Prefix: //DistributorReport	File	Pay	Map	Category	Notes
			is '125' or '130'. If the schedule type is '5XA', the airport code <u>must</u> be 'SLC'. If the schedule type is '5X', the airport code <u>cannot</u> be 'SLC'.		
END CHOICE (Destination)					
/DistributorSchedule/Carrier/FEIN	Yes	No	Column 2 - Carrier FEIN	TC109-B	
/DistributorSchedule/Carrier/Name	Yes	No	Column 1 - Carrier Name	TC109-B	
/DistributorSchedule/Seller/FEIN	Yes	No	Column 7 - Purchaser FEIN	TC109-B	
/DistributorSchedule/Seller/Name	Yes	No	Column 6 - Purchaser Name	TC109-B	
/DistributorSchedule/Net	Yes	No	Column 10 Net gallons	TC109-B	
/DistributorSchedule/Gross	Yes	No	Column 11 Gross gallons	TC109-B	

6. Populating XML FINANCIAL Data Elements (Table Layouts)

Return Payment (FinancialTransaction.xsd)

FinancialTransaction.xsd is used to submit an ACH debit request as a return payment which will apply to the filing period specified in the header of the submission. USTC allows submissions to include return with payment, return only or payment only. Use the table below as a guide for populating data elements of the current schema set.

Element XPATH (FinancialTransaction.xsd) XPATH Prefix: //FinancialTransaction/StatePayment	File	Pay	Map	Category	Notes
BEGIN CHOICE (Account Type)					
/Checking	No	Yes	State	Payment	
OR (Account Type)					
/Savings	No	Yes	State	Payment	
END CHOICE (Account Type)					
/RoutingTransitNumber	No	Yes	State	Payment	
/BankAccountNumber	No	Yes	State	Payment	
/PaymentAmount	No	Yes	State	Payment	
/IdentificationNumber	No	No	State	Payment	
/AccountHolderName	No	Yes	State	Payment	
/AccountHolderType	No	No	State	Payment	
/RequestedPaymentDate	No	No	State	Payment	

7. Enumerations

Country

Country Code	Country Decode
AF	Afghanistan
AX	Akrotiri Base Area
XI	Aland Island
AL	Albania
AG	Algeria
AQ	American Samoa
AN	Andorra
AO	Angola
AV	Anguilla
AY	Antarctica
AC	Antigua and Barbuda
AR	Argentina
AM	Armenia
AA	Aruba
XA	Ascension
AT	Ashmore and Cartier Islands
AS	Australia
AU	Austria
AJ	Azerbaijan
XZ	Azores
BF	Bahamas
BA	Bahrain
FQ	Baker Islands

Country Code	Country Decode
BG	Bangladesh
BB	Barbados
BS	Bassas da India
BO	Belarus
BE	Belgium
BH	Belize
BN	Benin
BD	Bermuda
BT	Bhutan
BL	Bolivia
BK	Bosnia-Herzegovina
BC	Botswana
BV	Bouvet Island
BR	Brazil
IO	British Indian Ocean Territory
VI	British Virgin Islands
BX	Brunei
BU	Bulgaria
UV	Burkina Faso
BM	Burma
BY	Burundi
CB	Cambodia
CM	Cameroon
CA	Canada
XY	Canary Islands
CV	Cape Verde
CJ	Cayman Islands

Country Code	Country Decode
CT	Central African Republic
CD	Chad
XC	Channel Islands
CI	Chile
CH	China
KT	Christmas Island
IP	Clipperton Island
CK	Cocos (Keeling) Islands
CO	Colombia
CN	Comoros
CF	Congo (Brazzaville)
CG	Congo (Democratic Republic)
CW	Cook Islands
CR	Coral Sea Islands
VP	Corsica
CS	Costa Rica
IV	Cote D'Ivoire (Ivory Coast)
HR	Croatia
CU	Cuba
CY	Cyprus
EZ	Czech Republic
DA	Denmark
DX	Dhekelia Base Area
DJ	Djibouti
DO	Dominica
DR	Dominican Republic
TT	East Timor

Country Code	Country Decode
EC	Ecuador
EG	Egypt
ES	El Salvador
XE	England
EK	Equatorial Guinea
ER	Eritrea
EN	Estonia
ET	Ethiopia
EU	Europa Island
FK	Falkland Islands (Islas Malvinas)
FO	Faroe Islands
FM	Federated States of Micronesia
FJ	Fiji
FI	Finland
FR	France
FG	French Guiana
FP	French Polynesia
FS	French Southern and Antarctic Lands
GB	Gabon
GA	The Gambia
GZ	Gaza Strip
GG	Georgia
GM	Germany
GH	Ghana
GI	Gibraltar
GO	Glorioso Islands
GR	Greece

Country Code	Country Decode
GL	Greenland
GJ	Grenada
VC	Grenadines
GP	Guadeloupe
GQ	Guam
GT	Guatemala
GK	Guernsey
GV	Guinea
PU	Guinea-Bissau
GY	Guyana
HA	Haiti
HM	Heard Island and McDonald Islands
HO	Honduras
HK	Hong Kong
HQ	Howland Island
HU	Hungary
IC	Iceland
IN	India
ID	Indonesia
IR	Iran
IZ	Iraq
EI	Ireland
IS	Israel
IT	Italy
JM	Jamaica
JN	Jan Mayen
JA	Japan

Country Code	Country Decode
DQ	Jarvis Island
JE	Jersey
JQ	Johnston Atoll
JO	Jordan
JU	Juan de Nova Island
KZ	Kazakhstan
KE	Kenya
KQ	Kingman Reef
KR	Kiribati
KN	Korea, Democratic People's Republic of (North)
KS	Korea, Republic of (South)
KU	Kuwait
KG	Kyrgyzstan
LA	Laos
LG	Latvia
LE	Lebanon
LT	Lesotho
LI	Liberia
LY	Libya
LS	Liechtenstein
LH	Lithuania
LU	Luxembourg
MC	Macau
MK	Macedonia
MA	Madagascar
MI	Malawi
MY	Malaysia

Country Code	Country Decode
MV	Maldives
ML	Mali
MT	Malta
IM	Man, Isle of
RM	Marshall Islands
MB	Martinique
MR	Mauritania
MP	Mauritius
MF	Mayotte
MX	Mexico
MQ	Midway Islands
MD	Moldova
MN	Monaco
MG	Mongolia
MJ	Montenegro
MH	Montserrat
MO	Morocco
MZ	Mozambique
XM	Myanmar
WA	Namibia
NR	Nauru
BQ	Navassa Island
NP	Nepal
NL	Netherlands
NT	Netherlands Antilles
NC	New Caledonia
NZ	New Zealand

Country Code	Country Decode
NU	Nicaragua
NG	Niger
NI	Nigeria
NE	Niue
NF	Norfolk Island
XN	Northern Ireland
CQ	Northern Mariana Island
NO	Norway
MU	Oman
XX	Other Country (country not identified elsewhere)
PK	Pakistan
LQ	Palmyra Atoll
PS	Palau
PM	Panama
PP	Papua-New Guinea
PF	Paracel Islands
PA	Paraguay
PE	Peru
RP	Philippines
PC	Pitcairn Islands
PL	Poland
PO	Portugal
RQ	Puerto Rico
QA	Qatar
RE	Reunion
RO	Romania
RS	Russia

Country Code	Country Decode
RW	Rwanda
WS	Samoa and Western Samoa
SM	San Marino
TP	Sao Tome and Principe
SA	Saudi Arabia
XS	Scotland
SG	Senegal
RB	Serbia
SE	Seychelles
SL	Sierra Leone
SN	Singapore
XR	Slovak Republic
LO	Slovakia
SI	Slovenia
BP	Solomon Islands
SO	Somalia
SF	South Africa
SX	South Georgia and the South Sandwich Islands
SP	Spain
PG	Spratly Islands
CE	Sri Lanka
SH	St. Helena
SC	St. Kitts and Nevis
ST	St. Lucia Island
SB	St. Pierre and Miquelon
VC	St. Vincent and the Grenadines
SU	Sudan

Country Code	Country Decode
NS	Suriname
SV	Svalbard
WZ	Swaziland
SW	Sweden
SZ	Switzerland
SY	Syria
TW	Taiwan
TI	Tajikistin
TZ	Tanzania
TH	Thailand
TO	Togo
TL	Tokelau
TN	Tonga
TD	Trinidad and Tobago
XT	Tristan Da Cunha
TE	Tromelin Island
TS	Tunisia
TU	Turkey
TX	Turkmenistan
TK	Turks and Caicos Islands
TV	Tuvalu
UG	Uganda
UP	Ukraine
AE	United Arab Emirates
UK	United Kingdom (England, Northern Ireland, Scotland, and Wales)
UC	Unknown Country
UY	Uruguay

Country Code	Country Decode
UZ	Uzbekistan
NH	Vanuatu
VT	Vatican City
VE	Venezuela
VM	Vietnam
VQ	Virgin Islands
WQ	Wake Island
XW	Wales
WF	Wallis and Futuna
WE	West Bank
WI	Western Sahara
YM	Yemen (Aden)
YI	Yugoslavia
ZA	Zambia
ZI	Zimbabwe

State

State Code	State Decode
AL	Alabama
AK	Alaska
AS	American Samoa
AZ	Arizona
AR	Arkansas
CA	California
CO	Colorado
MP	Commonwealth of the Northern Mariana Islands

State Code	State Decode
CT	Connecticut
DE	Delaware
DC	District of Columbia
FM	Federated States of Micronesia
FL	Florida
GA	Georgia
GU	Guam
HI	Hawaii
ID	Idaho
IL	Illinois
IN	Indiana
IA	Iowa
KS	Kansas
KY	Kentucky
LA	Louisiana
ME	Maine
MH	Marshall Islands
MD	Maryland
MA	Massachusetts
MI	Michigan
MN	Minnesota
MS	Mississippi
MO	Missouri
MT	Montana
NE	Nebraska
NV	Nevada
NH	New Hampshire

State Code	State Decode
NJ	New Jersey
NM	New Mexico
NY	New York
NC	North Carolina
ND	North Dakota
OH	Ohio
OK	Oklahoma
OR	Oregon
PW	Palau
PA	Pennsylvania
PR	Puerto Rico
RI	Rhode Island
SC	South Carolina
SD	South Dakota
TN	Tennessee
TX	Texas
VI	U.S. Virgin Islands
UT	Utah
VT	Vermont
VA	Virginia
WA	Washington
WV	West Virginia
WI	Wisconsin
WY	Wyoming
AA	Armed Forces the Americas
AE	Armed Forces Europe
AP	Armed Forces Pacific

Province

Province Code	Province Decode
AB	Alberta
BC	BC
MB	Manitoba
NB	New Brunswick
NL	Newfoundland
NT	Northwest Territory
NS	Nova Scotia
NU	Nunavut
ON	Ontario
PE	Prince Edward Island
QC	Quebec
SK	Saskatchewan
YT	Yukon Territory

Mode

Mode Code	Mode Decode
J	Truck
R	Rail
B	Barge
S	Ship
PL	Pipeline
GS	Gas Station
BA	Book Adjustment

Mode Code	Mode Decode
ST	Stationary Transfer
RT	Removal from bulk transfer system (other than by truck or rail) for sale or consumption

Type Of Address

TypeOfAddress
Both
Business
Mailing

Airport Code

Airport Code	Airport Decode
17U	Jake Garn
1L7	Escalante
1L8	Hurricane
1L9	Parowan
33U	Dutch John
36U	Heber City
38U	Wayne
40U	Manila
41U	Manti
42U	Morgan
43U	Mount Pleasa
44U	Salina
66V	Bluff
69V	Huntington

Airport Code	Airport Decode
74V	Roosevelt
BCE	Bryce Canyon
BDG	Blanding
BMC	Brigham City
BTF	Skypark
CDC	Cedar City
CNY	Moab
DTA	Delta
ENV	Wendover
HVE	Hanksville
KNB	Kanab
LGU	Logan
MLF	Milford
OGD	Ogden
PUC	Carbon
PVU	Provo
RIF	Richfield
SGU	St. George
SLC	Salt Lake
TVY	Tooele
U07	Bullfrog
U13	Junction
U14	Nephi
U19	Fillmore
U34	Green River
U42	South Valley
U43	Monticello

Airport Code	Airport Decode
U52	Beaver
U55	Panguitch
U69	Duchesne
U77	Spanish Fork
U96	Halls Cross
VEL	Vernal

Account Holder Type

Account Holder Type
1
2

Missing EIN Reason

Missing EIN Reason
APPLD FOR
FOREIGNUS

Type of Filing

Type Of Filing
Original
Replace
Resubmit

Originator Type

Originator Type
ERO
OnlineFiler
ReportingAgent
IRSAgent
FinancialAgent
LargeTaxpayer